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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/416,098	10/12/1999	TERESA H. MENG	259697	5713
4586	7590	06/01/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			LIU, SHUWANG	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/416,098	MENG ET AL.
	Examiner Shuwang Liu	Art Unit 2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 January 2005.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,4,5,8,9,15,16,18,19,22,23,29,31,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,4,5,8,9,15,16,18,19,22,23,29,31,34 and 35 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 15, 29, 31 and 34-35 have been considered but are moot in view of the new ground(s) of rejection because of the amendment.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

As disclosed in lines 14-18 of page 9, it is unclear what "the received signal" in line 16 refers to.

Correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 2, 4, 5, 8, 9, 15, 16, 18, 19, 22, 23, 34 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what "the received" signal and "detected" signal in line 6 of claim 1, lines 5-6 of claim 15, line 6 of claim 34 and line 6 of claim 35 refer to.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4, 5, 8, 15, 16, 18, 19, 22, 29, 34 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones et al. (US 6,876,675) (whereby, the comparison of received and detected signals is interpreted to be a comparison between two signals).

As shown in figures 1-7, Jones et al. discloses a device adapted to be used in OFDM system, in which a first transceiver (figures 1 and 2, see column 4, lines 23-39) that can communicate with a second transceiver (figures 1 and 2, see column 4, lines 23-39) using a common carrier frequency (column 1, lines 40-53), the device comprising:

(1) regarding claims 1, 15, 34 and 35:

means (216-228) for detecting responsive to a continuous comparison of received and detected signals an offset (column 7, line 15-column 9, line 60) between the common frequency used by the first unit and the second transceiver units in a first signal transmitted by the first transceiver unit and received by second transceiver unit (column 4, lines 15-47, column 8, lines 32-37, and 406 in figure 4);

means for communication information corresponding to detected offset from the second transceiver unit to the first transceiver unit (column 4, lines 23-39); and

means (120 and 118 in figure 1 and 206 and 208 in figure 2) for adjusting the common frequency in accordance with the offset detected responsive to a continuous comparison of received and detected signals in a second signal to be transmitted by the second transceiver unit and to be received by the first transceiver unit so that the effects of the offset to be perceived by the first unit will be substantially reduced in preemptive manner (inherently), the second signal to be transmitted being thereby adjusted to be in substantial frequency lock with the common frequency reference of the first transceiver unit (column 1, lines 40-58 and column 3, line 65-column 4, line 47).

(2) regarding claims 2 and 16:

wherein the common frequency is a carrier frequency (column 3, lines 65-67 and column 4, lines 23-39).

(3) regarding claims 4 and 18:

wherein he means for detecting the offset includes means for performing a correlation on a digital representation of the first signal so as to lock onto the offset in the carrier frequency (column 9, line 60-column 10, line 11).

(4) regarding claims 5 and 19:

wherein the means for adjusting the common frequency includes a means ( 206) for digitally shifting data in frequency to be transmitted in accordance with the carrier frequency and the offset.

(5) regarding claims 8 and 22:

wherein the means for detecting the offset includes means includes means (33) for locking onto the offset in the carrier frequency and for producing an output signal corresponding thereto (column 4, lines 23-39).

(6) regarding claim 29:

a frequency lock loop (228, column 4, lines 23-39) that is coupled to receive a digital representation of a first signal transmitted by the second transceiver, the frequency lock loop being adapted to detect a carrier frequency offset in the first signal and to produce offset information corresponding thereto (column 4, lines 15-47, column 8, lines 32-37, and 406 in figure 4); and

a frequency shift block (206) that is coupled to receive the offset information and data to be transmitted by the first transceiver in a second signal to be received by the second transceiver, the frequency shift block being adapted to digitally shift the digital data in frequency in accordance with the common carrier frequency and the carrier frequency offset so that the effects of the carrier frequency offset to be perceived by the second transceiver will be substantially reduced (inherently) in preemptive manner for wireless bi-directional communication between the first and the second transceiver (column 1, lines 40-58 and column 3, line 65-column 4, line 47).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 56,876,675) in view of Theus et al. (US 5,805,029).

Jones et al. discloses all of the subject matter as described above (in claims 8, 22 and 29) except for specifically teaching a crystal oscillator that supplies a reference frequency for modulating a second signal to be perceived by the second unit in accordance with the common carrier frequency.

Theus et al. teaches a digital adjustable crystal oscillator (1 and 2 in figures 1 and 4).

It would be desirable to use a crystal oscillator in order to provide frequency changes over a greater frequency range while still providing stable oscillation (column 1, lines 46-49, Theus et al.). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the crystal oscillator as taught by Theus et al. to replace the oscillator 12a or 12b of Clarke et al. in order to provide frequency changes over a greater frequency range while still providing stable oscillation.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

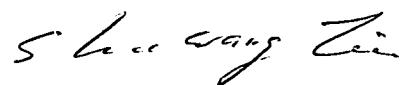
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu  
Primary Examiner  
Art Unit 2634

May 17, 2005